

# PHENIX WEEKLY PLANNING

5/29/2008 Don Lynch



#### Shutdown '08 Schedule

Shutdown Prep Mu Trigger, RPC Prototype Installation, New Beampipe, CM Crane, Sta. 1 and MMN Scaffolding Reviews RPC Prototype C tests (in tent) Install/field fit CM access stairs Build MMN scaffolding Build Sta. 1 N. scaffolding MuTr Decapacitations (Sta. 1 N and MMN) RPC Prototype D tests (in tent) Design RPC installation fixtures & MuTrigger FEE platforms Prep work for Mutrgr platforms (water/elec) Prep work for RPC proptotype install move (7) MuID pipes move gap 5 south cable tray

Done

All Done, Action Items in progress in progress

in progress in progress .

in progress

6/2 Apr-May

in progress

May-June

May-June

May 30

End of run Party



#### Shutdown '08 Schedule, cont'd

Prep RPC Proto, MuTrggr FEE N&S Racks Apr-July RPC engineering & safety review ~June 24 MuTrigger FEE N Install July - Aug. Install MuTrigger N cooling water & air July - Aug. July - Aug RPC prototype gas system Move shielding for RPC prototype installation July - Sep RPC prototype cable routing & support July - Aug Modify crystal palace & vapor barrier July - Aug Install MuTrigger FEE N platform&Rack **July 15 - Aug 1** RPC prototype install Sep.-Oct. (RPC2 - PHENIX) (RPC3 - C. Pearson) Install RPC prototype rack in tunnel south Sep. Install Mutrigger FEE's in MMS for RPC test Sep. Install MuTrigger FEE South platform Sep. Install MuTrgr S rack cooling & electric Sep. **HBD** Install Sep.-Oct. Connect electronics/gas/water/air for RPC Sep. - Nov. Sep. - Nov Install MuTrigger N& 5 racks PC1 west work (needs planning) Sep. - Nov. CM Crane Install Oct. DC East?/West Repairs Oct. - Nov. Replace tunnel shielding Nov. (C. Pearson)

#### PHENIX

#### Shutdown '08 Schedule, cont'd

Remove all inst'n equipment(e.g. scaffolds)

Gap 5 north piping and cable tray re-loc.

Gap 2 north cable tray & crate re-mounts

Fan Tray maintenance

Prep for shutdown 2009

Prep for run 9

Close shield wall start shifts

Start physics

Oct. - Nov Oct. - Dec. Oct. - Dec Oct. - Dec. Nov. - Dec Dec

Dec. Jan 1





#### Shutdown '08 Electrician Work

- 1) Upgrade Crane switch: arc flash mitigation-remotely operated contactor which will feed the IR crane disconnect switch
- 2) Install HVAC cooling and/or fan power circuits into RPC tent. Install fans/cooling units.
- 3) Run Power to new MuTrgr FEE racks on MMN and MMS
- 4) Install <u>power</u> and <u>signal</u> cable tray (ceiling suspended) for new DCM rack row north of existing DCM racks.
- 5) Install power feeds to RPC north & south tunnel racks from IR power panels.
  - NOTE: MuTr north power panel has no available breakers to feed north tunnel racks (south panel has spare breakers for use). More engineering analysis is required to determine if the north power panel should be increased in size or for installation of a sub panel branch can be accomplished.
- 6) Assist in signal cable installation for MuTr/RPC upgrades as necessary.
- 7) Upgrade power capacity of Central Magnet power distribution for future bridge rack loads.
  - a) Remove existing 15KVA transformer and install 45KVA unit.
  - b) Install new (larger size) power cable from rack room to Central Magnet distribution breaker panels.
- 8) Install 120 volt AC power drops into new control room annunciator alarm rack (rack room).



#### Work Permit Requirements

- CM Crane Installation
- RPC Prototype Installation
- · HBD re-installation
- PC1 Repairs

These WP's not needed until Sept.

(More will be needed - to be added to the list as appropriate)





# PHENIC Engineering and Technical Support Group



Spreadsheets updated, please review/correct/return to D. Lynch ASAP. Next Integration meeting tomorrow

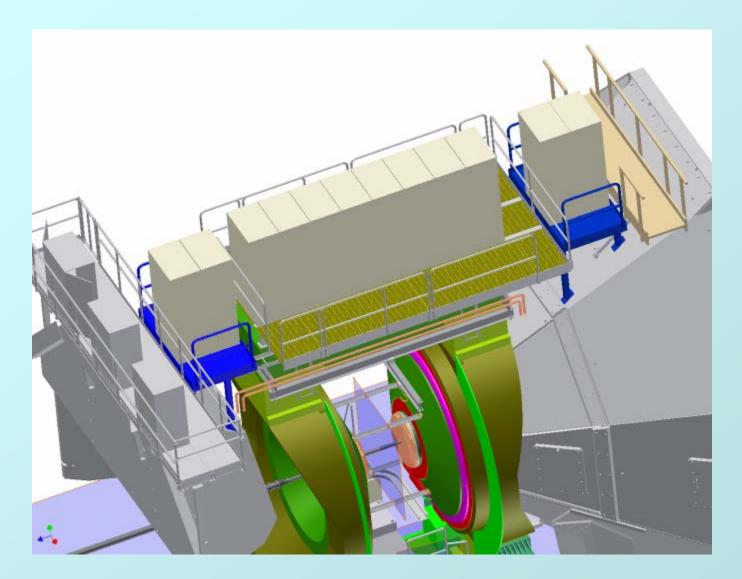
#### Shutdown Work \$\$\$

#### Projects Include:

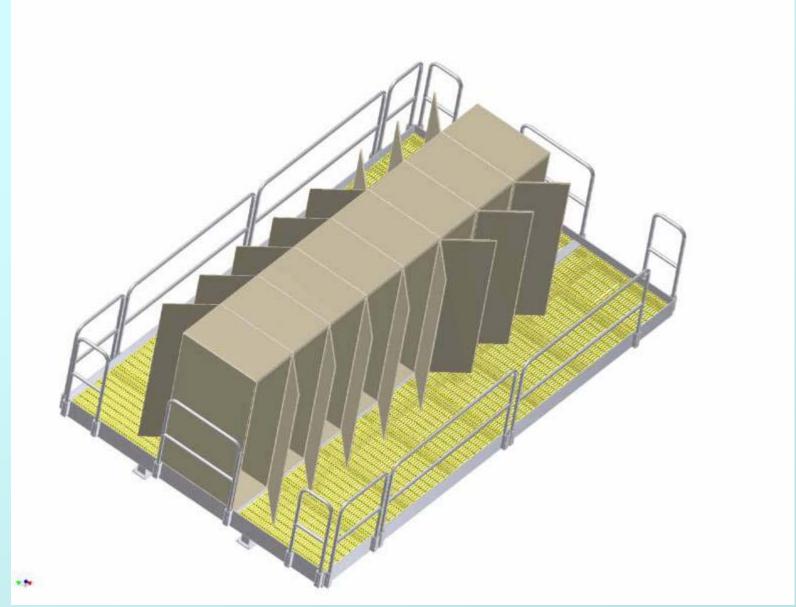
- 1. CM Crane
- 2. New 40 mm ID beampipe
- 3. RPC Factory
- 4. RPC Prototype Installation
- 5. RPC Final Installation
- 6. MuTrigger FEE Upgrade
- 7. CM Access Stairs
- 8. MuTr Decapitations
- 9. Gas House Reorganizationmaintenance
- 10. Bridge Rework
- 11. HBD Re-installation
- 12.DC East & West Repairs
- 13.PC1 Repair
- 14. Rack room UPS upgrade
- 15. Bridge Power upgrade
- 16. Rack Room Update
- 17. Detector Rack Fan tray replacement
- 18. Safety System Upgrade
- 19. Cooling Water system upgrade
- 20.DAQ/Trigger Upgrade
- 21.DCM II Development
- 22.VTX support
- 23.FVTX support
- 24.NCC support



# MuTrgr North FEE Rack Platform









#### North

NMT4

Rack Fower Controller

(1U Blank Space)

21 PECL - Fiber Fanout

Fan Tray

Heat Exchanger (1U Blank Space)

3 PECL - PECL Fanout

Fan Teny

Heat Exchanger

(1U Blank Space

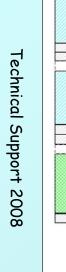
LV Distribution Crate

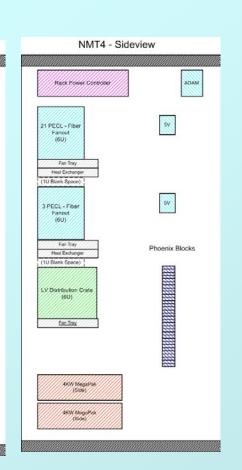
(60)

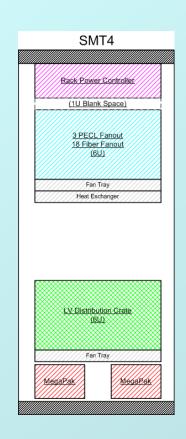
Fan Tray

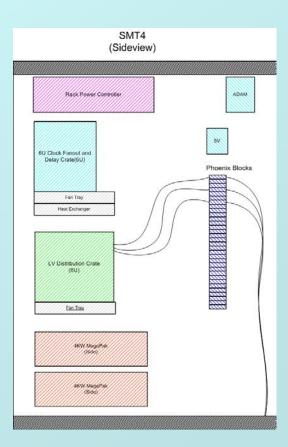
Megaffak

# MuTrigger Racks South









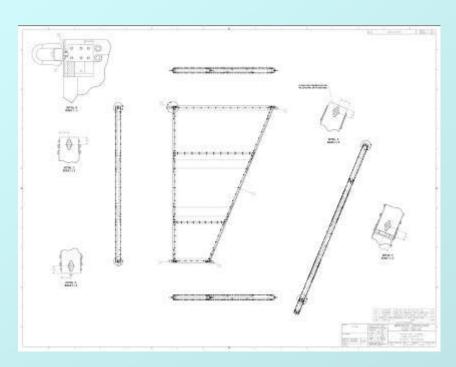
Mike L. & Frank have begun prepping these. Need info on RPC prototype rack.

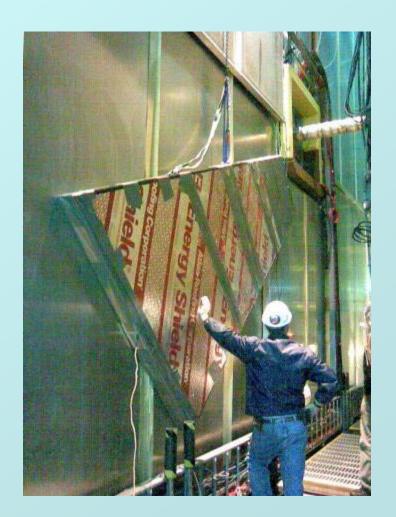


# RPC Prototype

Rec'd dim's and lifting points from Larry B.

Need to decide on prototype orientation and alignment for Sta 1 & 2 based on absorber location.





### PHENIX

#### RPC Factory Support, cont.

(2) ~3 Ton thru-the-wall AC's available from CA-D

208V Need isolated electrical source

Supplemental portable 1-1/4 ton unit ordered

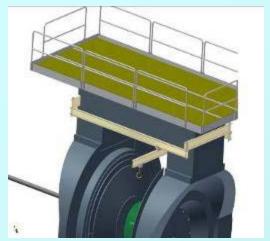
Storage Shelving: 2 additional sets rec'd. Assembly is done.





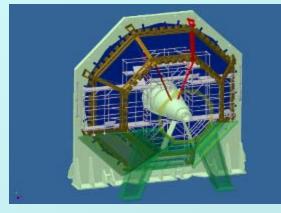
#### Combined CM Crane, MMN & Station 1 scaffolding







Crane installation Postponed until fall





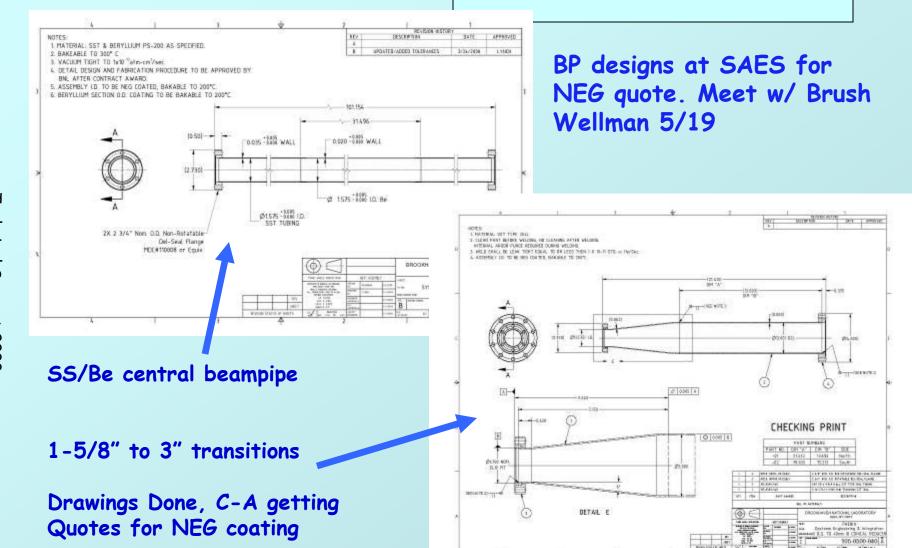
Station 1 components rec'd. CS items in progress

WP is approved

Station 2/3 construction is underway

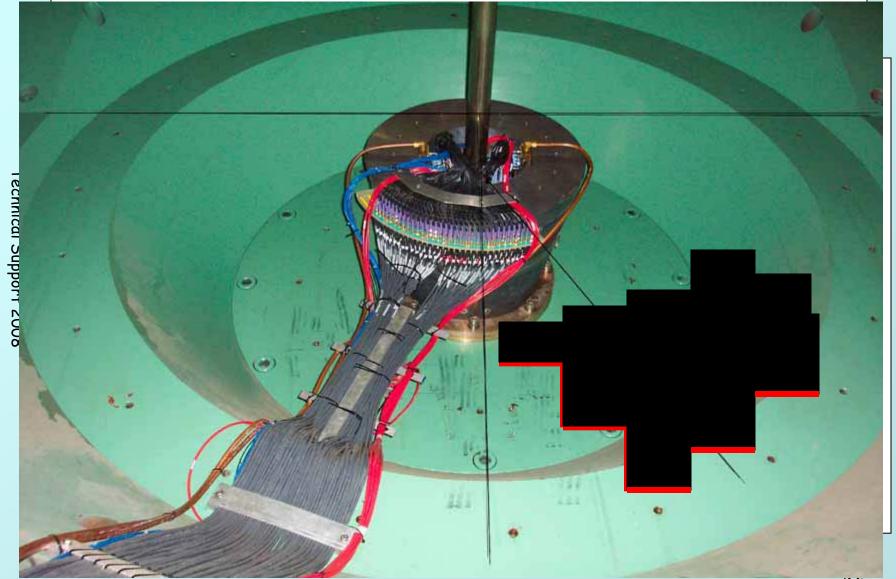


#### New Beampipe Design & Review



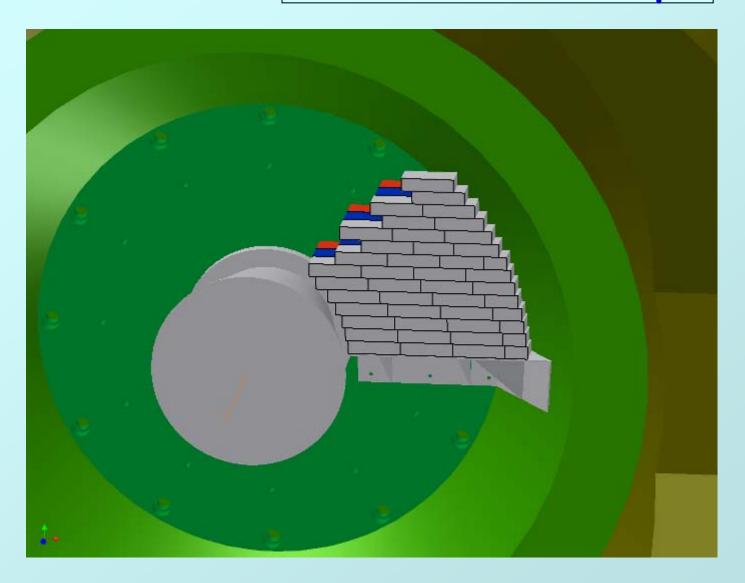


# Shelf & Pb brick concept



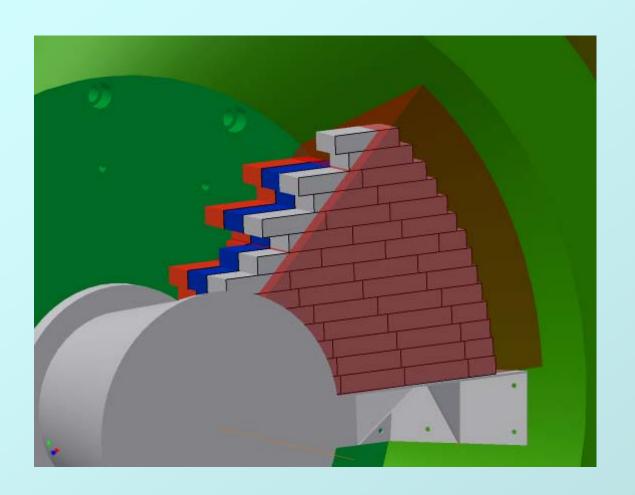


# RPC Absorber Concept





### RPC Absorber Concept

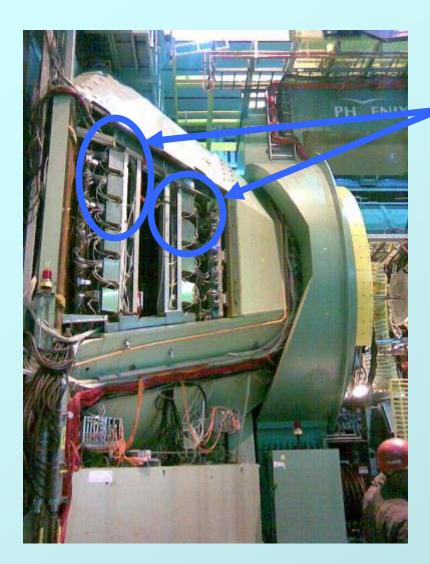


Uses 112 2x4x8 PB bricks, 22 need to be cut

12 inches deep (RPC group requsted 35 mm (13.8 in)



#### MuTrigger FEE upgrades in MMS

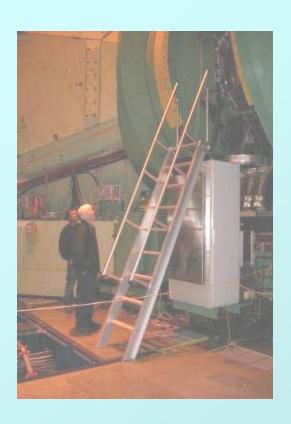


To match absorber and prototype RPC's, we need to install new FEE upgrades in these 5 MuTR FEE's

We will develop a plan to access these for installation and testing from manlift. Plumbing and cabling are accessible from manlift.



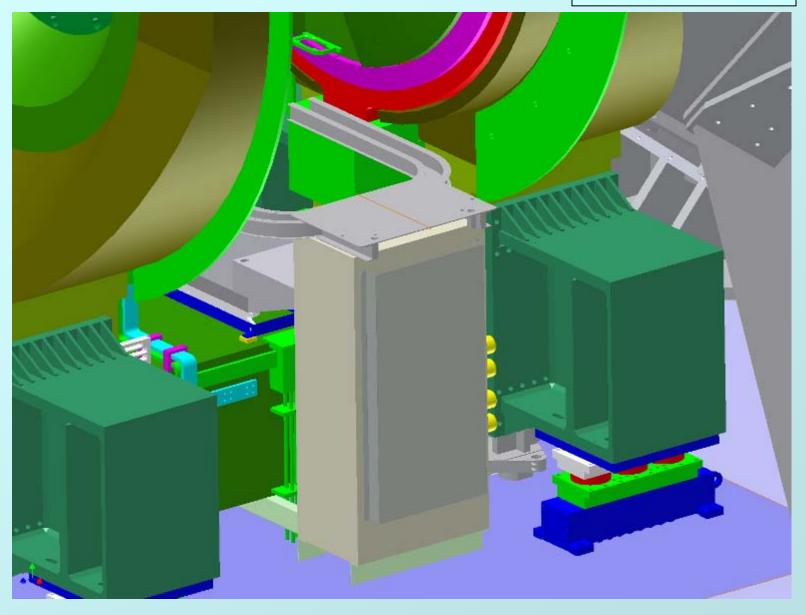
# CM Access







# CM Access





#### Safety, Security, etc.

1: Electrical Safety: May is Electrical Safety Month (Doe & NFPA)

BNL Electrical Safety Program Area web site has info on BNL electrical safety requirements:

http://www.bnl.gov/esh/shsd/Programs/Program\_Area\_Electrical\_Safety.asp e.g. rules for using power strips and extension cords

2. BNL vs. C-AD TLD requirements

BNL: GERT training sufficient

C-AD: Rad Worker I required

Compromise: List of PHENIX and RPC personnel who will be working in the tunnel during shutdown.

These will be issued temporary TLD's and blue pass cards for shutdown period only. Anyone who needs to access tunnel during run will need Rad Worker I.

- 3. A little notice before turning out the lights in the IR is apropriate.
- 4. New SBMS on documentation control and record keeping.



# Where To Find PHENIX Engineering Info







Welcome Summer!! (meteorological) begins on Sunday 6/1

Links for the weekly planning meeting slides, long term planning, pictures, videos and other technical info can be found on the web site:



http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL\_SSint-page.htm